

**Before the  
Federal Communications Commission  
Washington, DC 20554**

In the Matter of )  
 )  
The Emergency Connectivity Fund for )  
Educational Connections and Devices to ) WC Docket No. 21-93  
Address the Homework Gap During the Pandemic )

To: The Commission

**COMMENTS OF**

**NEW AMERICA’S OPEN TECHNOLOGY INSTITUTE  
NATIONAL HISPANIC MEDIA COALITION  
NATIONAL DIGITAL INCLUSION ALLIANCE  
INSTITUTE FOR LOCAL SELF-RELIANCE  
NEXT CENTURY CITIES  
PUBLIC KNOWLEDGE  
ACCESS HUMBOLDT  
DIGITAL TRIBAL VILLAGE  
X-LAB**

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## Table of Contents

<b>I. Summary .....</b>	<b>3</b>
<b>II. Congress Intends that the Emergency Connectivity Fund Should Support a Wide Range of Connectivity Solutions in a Technology-Neutral Manner .....</b>	<b>6</b>
<b>III. The Commission Should Allow Schools and Libraries to Determine the Best Mix of Connectivity Solutions, Including Self-Provisioned Connections .....</b>	<b>12</b>
<i>A. Schools and Districts Have Led the Way to Show the Commission Promising Examples of the Need for Supporting Self-Provisioned Networks .....</i>	<i>15</i>
<i>B. The Commission Should Explicitly Allow Self-Provisioned Networks to Ensure Schools and Libraries are Empowered to Choose Optimal Solutions to the Homework Gap .....</i>	<i>24</i>
<b>IV. The Commission Should Allow Schools and Libraries the Flexibility to Provide Service In the Locations They Sees Fit to Bridge the Homework Gap .....</b>	<b>30</b>
<b>V. Conclusion .....</b>	<b>31</b>

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New America’s Open Technology Institute (OTI), the National Hispanic Media Coalition, the National Digital Inclusion Alliance, Next Century Cities, Public Knowledge, the Institute for Local Self-Reliance, Access Humboldt, Digital Tribal Village and X-Lab (collectively, “Public Interest Organizations” or “PIOs”) submit these Comments in response to the *Public Notice* in the above-captioned proceeding.<sup>1</sup> The PIOs have repeatedly urged the Commission to expand the funding and flexibility that E-Rate recipients need to extend adequate broadband access that students and teachers require for remote learning during the COVID-19 pandemic, including through a petition with other advocacy groups earlier this year and comments and reply comments in response to he Commission’s Public Notice seeking comment

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<sup>1</sup> Wireline Competition Bureau Seeks Comment on Emergency Connectivity Fund for Educational Connections and Devices to Address the Homework Gap During the Pandemic, WC Docket No. 21-93 (Rel. March 16, 2021), <https://docs.fcc.gov/public/attachments/DA-21-317A1.pdf> (“Public Notice”).

on those petitions.<sup>2</sup> The PIOs strongly support the American Rescue Plan’s appropriation of \$7.17 billion to support the Emergency Connectivity Fund and extend broadband service to millions of students and library patrons who lack the internet access. We submit these comments with recommendations for how best to implement the rules to ensure the Emergency Connectivity Fund best meets the needs of educational institutions and students in urgent need.

## **I. Summary**

The rules of the Emergency Connectivity Fund will be crucial as they will determine whether schools and libraries are permitted to innovate and develop locally-driven solutions to match their specific needs or if they will be required to shoehorn certain mandated technologies, equipment, services, and networks to meet local challenges. PIOs respectfully submit the following recommendations for the Commission’s rules.

First, the PIOs urge the Commission to clarify that extending school networks directly to students at home and other self-provisioned connections are among the “different technological solutions” that Congress has authorized for reimbursement from the Emergency Connectivity Fund provided that the funds are used exclusively to connect students and teachers for remote learning and other core educational purposes related to closing the homework gap. Lawmakers

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<sup>2</sup> Petition for Expedited Declaratory Ruling and Waivers filed by the Schools, Health & Libraries Broadband Coalition, et al., WC Docket No. 13-184 (filed Jan. 26, 2021), <https://www.fcc.gov/ecfs/filing/101260036427898> (“SHLB, et al. Petition”); Comments of New America’s Open Technology Institute & Education Policy Program, Public Knowledge, Consumer Reports, the Benton Institute for Broadband & Society, and Access Humboldt, WC Docket No. 21-31 (Feb. 16, 2021) (“PIO E-Rate Petition Comments”); Reply Comments of New America’s Open Technology Institute & Education Policy Program, Public Knowledge, Common Sense, Consumer Reports, the Benton Institute for Broadband & Society, and Access Humboldt, WC Docket No. 21-31 (Feb. 23, 2021) (“PIO E-Rate Petition Reply Comments”); “OTI Urges FCC to Authorize \$2.2 Billion in Available E-Rate Funds to Connect Students Left Behind During COVID-19 Pandemic,” New America’s Open Technology Institute Press Release (April 8, 2020) <https://www.newamerica.org/oti/press-releases/oti-urges-fcc-authorize-22-billion-available-e-rate-funds-connect-students-left-behind-during-covid-19-pandemic/>.

stated in the House Committee Report accompanying the bill: “Additional emergency funding will ensure that students and low-income Americans have access to reliable high-speed internet in locations other than schools and libraries *through different technological solutions, including residential broadband service provided in different forms*, or through Wi-Fi hotspots, either incorporated into mobile phone or provided on a standalone basis, among other things.”

Second, the Commission should promulgate rules that recognize the widely-varying circumstances in communities across the nation and therefore empower schools and libraries to use the financial support of the Emergency Connectivity Fund to fund whatever mix of technologies, equipment, and services that local officials determine best fit local circumstances and needs. Cable services are not available in many areas and cellular signals are not strong enough to support remote learning in homes, particularly by multiple students, in many other communities or even in outlying areas of many urban and suburban districts. The E-Rate program has never chosen technological winners and losers and should remain neutral on which solutions schools opt to deploy.

Third, the Commission should allow for schools and libraries to adopt self-provisioned networks to directly connect students without adequate internet access directly to the school’s network. While the Commission would be justified in putting a per student cap on the amount of funding reimbursed for “self-provisioned” connections—or for any other connections for that matter—there appears to be no rational basis for excluding a proven means of providing students with internet access that is often more robust and more cost-effective than purchasing mass-market ISP subscriptions which, in some portions of many districts, may be unavailable, unworkable (e.g., because cellular signals or capacity is inadequate to stream live class sessions indoors), or more expensive and financially unsustainable. Put simply, school districts and

libraries are going to need every possible resource and tool to address the temporary remote learning crisis, the root cause was an inequitable homework gap that will persist long after herd immunity and the full reopening of all the nation's schools and libraries.

Self-provisioned networks are no less cost-effective than those of incumbent providers. PIOs present a variety of case studies demonstrating how self-provisioned networks have offered service to communities during the pandemic for the specific purpose of remote learning. These examples demonstrate several instances where districts clearly determined self-provisioned networks to be the most cost-effective as well as efficient method through which to provide service—made clear due to the fact that each case by definition has been unable to rely on E-Rate support for their deployment due to the aforementioned restrictive interpretation of E-Rate rules of the previous Commission's leadership.

Claims that self-provisioned and more permanent solutions to the homework gap are too costly are misplaced. The Commission has a straightforward and perhaps even inevitable remedy at hand: the rules can cap the reimbursement on a per-student basis to an amount deemed reasonable for conventional ISP services during the emergency period. Another rationale for technological-neutrality and deference to the judgment of local schools is that districts often have other sources of funding or subsidies that they could combine with a capped reimbursement to provide a superior and sustainable solution to the homework gap.

Finally, the Commission should not impose any restrictions on locations where schools and libraries can deploy service. Many students, teachers, and library patrons could be unhoused, lack a consistent address, or benefit from engaging in remote learning from an alternative location. School districts and libraries know their communities best and should be given the discretion to address local connectivity challenges through locally-driven solutions.

## **II. Congress Intends that the Emergency Connectivity Fund Should Support a Wide Range of Connectivity Solutions in a Technology-Neutral Manner**

In creating the Emergency Connectivity Fund, Congress has instructed the Commission to adopt implementation rules for addressing remote learning disparities exacerbated by the COVID-19 pandemic that are technology-neutral and support the full range of connectivity solutions. The PIOs believe schools and libraries should be empowered to use financial support from the Emergency Connectivity Fund to support whatever technologies and connectivity solutions local officials determine best meet the widely varying needs of their communities.

Accordingly, the PIOs urge the Commission to adopt the broadest possible definition for “the specific equipment and services commenters consider[ed] necessary to support and facilitate the connectivity required for remote learning during the defined emergency period.”<sup>3</sup> The Commission should include not only modems and Wi-Fi hotspots, but also any fixed wireless antennas, transmitters, towers, or installation needed to extend high-speed wireless connections directly to students, teachers and library patrons by leveraging any available technology or band of spectrum that is cost-effective in closing the homework gap. Many districts could almost immediately extend their school networks directly to student homes within range, typically by partnering with a local wireless ISP, by mounting antennas and transmitting access to their school networks using widely-available technologies that take advantage of the Citizens Broadband Radio Service (private LTE), Wi-Fi and TV White Space (unlicensed), or Educational Broadband Service (licensed) spectrum. Many districts have already done this.

The technology-neutral aspect of the American Rescue Plan Act is central to the statute’s intent to help schools and libraries connect students and patrons for remote learning. Lawmakers

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<sup>3</sup> Public Notice at 5.

stated in the House Committee Report accompanying the bill: “Additional emergency funding will ensure that students and low-income Americans have access to reliable high-speed internet in locations other than schools and libraries *through different technological solutions, including residential broadband service provided in different forms*, or through Wi-Fi hotspots, either incorporated into mobile phone or provided on a standalone basis, among other things.”<sup>4</sup> This explanation of Congressional intent makes it clear that support from the Emergency Connectivity Fund can and should be made available to fund a wide range of connectivity solutions—including telecommunications services, equipment and devices of *all types*—and to give local schools and libraries the discretion to determine the most appropriate “technological solutions” to meet the extremely diverse needs of their students and localities. This technology-neutral approach implicitly trusts, as it should, that local school and library officials are in the best position to understand the particular challenges and needs of their students, teachers, and patrons, which is exactly what the PIOs would expect Congress to enact during an emergency.

There is also widespread support for a technology-neutral approach to the Emergency Connectivity Fund, as the PIOs highlighted in Reply Comments in response to the Commission’s request for comment on several petitions—including the petition by the Schools Health Libraries Broadband (SHLB) Coalition that OTI also joined. This support included state governments, major technology companies, wireless internet service providers (WISPs), city governments, school districts, and library systems, as well as the public interest organizations signing these comments.<sup>5</sup> As the City of Chicago, Chicago Public Library and Chicago Public Schools,

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<sup>4</sup> Committee on the Budget House of Representatives, “Report of the Committee on the Budget House of Representatives to Accompany H.R. 1319,” at 306-307 (Feb. 24, 2021) (emphasis added), <https://www.congress.gov/117/crpt/hrpt7/CRPT-117hrpt7.pdf> (“Conference Report”). This is the only interpretation of Congressional intent to make the effort technology-neutral, since the Senate adopted the House version and did not issue a report.

<sup>5</sup> PIO E-Rate Petition Reply Comments at 10-12.



asserted: “Schools and libraries, in collaboration with the City and other partners, should be allowed to use E-rate discounts to purchase any goods and services necessary to connect students and patrons off-campus but engaged in educational purpose activities. This should include hotspots, but also the purchase of infrastructure such as fixed wireless equipment to extend Internet access from school campuses and library buildings.”<sup>6</sup>

The PIOs further agree with ENA Services, LLC:

... [T]he Commission has always declined to mandate specific technologies, maintaining that schools and libraries are in the best position to understand their own connectivity needs and make their own decisions accordingly.<sup>7</sup>

As part of its commitment to technology-neutral rules, the Commission should empower locally-driven solutions that include partnerships with local WISPs and technology companies to self-provision network solutions where needed. Successful examples of districts that have already deployed initiatives to deploy direct wireless connections in areas where cellular signals are weak, or where it would be far more cost effective (especially when partially subsidized by their municipal government), is detailed further in the next section. The importance of adopting a broad definition of eligible equipment, devices, and services to extend the broadband connectivity for students and library patrons needed to support distance learning is paramount and could mean the difference between the Emergency Connectivity Fund working or failing in many communities this legislation seeks to benefit.

For example, OTI interviewed officials in Lindsay Unified School District—a rural and poor farmworker community in California’s Central Valley—and in Fontana, California—where the school district is the anchor tenant for a private LTE network being constructed in

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<sup>6</sup> Comments of the City of Chicago, Chicago Public Library and Chicago Public Schools, WC Docket No. 21-31 (Feb. 16, 2021), at 3.

<sup>7</sup> Reply Comments of ENA Services, LLC, WC Docket No. 21-31 (Feb. 23, 2021), at 2.

partnership with Crown Castle Fiber. The superintendents of both districts said that one of the obstacles they encountered, which prompted the deployment of dedicated school networks, was that large areas of their districts lacked cable service or strong enough cellular signals that would be necessary to support the streaming video necessary for remote learning.<sup>8</sup> As OTI and the Schools, Health, and Libraries Broadband (SHLB) Coalition stated in a recent ex parte: “SHLB Coalition members seek the ability to put up antennas on school rooftops to connect to backhaul using E-Rate fiber to provide service to students’ homes...”<sup>9</sup> Further, OTI and SHLB highlighted how rural Lindsay CA serves as an example of both the need for technology-neutral rules and how an innovative school system can permanently close the homework gap:

Rural Lindsay, CA, presents a cautionary tale about an over-reliance on cellular hotspots and subscriptions to bridge the homework gap. Lindsay Unified School District initially considered offering students without internet access at home MiFi hotspot devices after being offered 2,000 free hotspots conditioned on the purchase of monthly mobile subscriptions: “[T]he district concluded that the total cost of nearly \$1 million annually was unsustainable. In addition, the indoor signal strength for mobile carrier 4G networks in much of Lindsay is spotty at best.”<sup>10</sup>

The Commission should follow Congressional intent and ensure that schools and libraries have the flexibility to mix and match “different technological solutions, including residential broadband service provided in different forms.”<sup>11</sup> Imposing

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<sup>8</sup> Michael Calabrese and Amir Nasr, “The Online Learning Equity Gap: Innovative Solutions to Connect All Students at Home,” New America’s Open Technology Institute Report (Nov. 17, 2020), <https://www.newamerica.org/oti/reports/online-learning-equity-gap/> (“OTI E-Rate Report”).

<sup>9</sup> Ex Parte Communication of New America’s Open Technology Institute and the Schools, Health, & Libraries Broadband Coalition, WC Docket No. 21-31, WC Docket No. 21-93, and WC Docket No. 17-310 (March 17, 2021), at 4 [https://ecfsapi.fcc.gov/file/10318486624628/OTI%20SHLB%20E-Rate%20and%20RHC%20Ex%20Parte\\_Starks\\_Final\\_031721.pdf](https://ecfsapi.fcc.gov/file/10318486624628/OTI%20SHLB%20E-Rate%20and%20RHC%20Ex%20Parte_Starks_Final_031721.pdf).

<sup>10</sup> *Ibid.*; OTI E-Rate Report at 24-26.

<sup>11</sup> *Conference Report* at 306-307.

restrictions on connectivity solutions in a misguided effort to pick winners and losers among technologies and ISPs would harm students and be counterproductive to the task at hand, which is to rapidly extend remote learning connections during a crisis and invest in closing the chronic homework gap that created this crisis.

Another case study of the cost-effective innovation that comes from local choice are the increasing number of libraries deploying Wi-Fi “kiosks” and “fixed library access stations” to provide broadband to students and other patrons in their communities. By deploying remote hotspots at community centers, at public housing sites, or even on portable bookmobiles, libraries extend their networks beyond the walls of the library and into the communities they serve using TV White Space spectrum, or Wi-Fi tapping into municipal fiber, or other fixed wireless solutions.<sup>12</sup> As Gigabit Libraries Network argues:

Installing these stations in every neighborhood will serve as an interim, if partial, solution for those waiting for new home connections and importantly, serve as a public backstop addressing the digital divide in our most vulnerable communities. . . . we estimate the average cost for a single library kiosk at between one and a few thousand dollars per station, depending on configuration and connectivity costs. Once installed these library service portals would become a permanent supplement to the nation’s connectivity infrastructure that increases access, equity and resilience in every community.<sup>13</sup>

The purpose of this proceeding is to support schools and libraries that have spent nearly an entire year hindered by E-Rate rules that denied them the flexibility to readily extend their networks to enable remote learning for students and educators off campus. Now that Congress has forced the Commission to face up to the homework gap and distribute more than \$7 billion to facilitate remote learning, the final rules should be as streamlined and flexible as possible, sweeping away barriers, whether explicit or implicit,

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<sup>12</sup> PIOs E-Rate Petition Reply Comments at 21-23.

<sup>13</sup> Comments of the Gigabit Libraries Network, WC Docket No. 21-31 (Feb. 16, 2021), at 5.

so that local schools and libraries can implement the mix of solutions best suited to their communities without running afoul of cost allocation or other E-Rate rules.

Arguments against “overbuilding” are completely irrelevant when it comes to remote learning connections that extend a school’s CIPA-filtered network directly to students and teachers using any number of wireless technologies. These connections are not substitutes for the sort of non-filtered and higher-capacity commercial internet service that households need and demand. As the next section describes, school districts that have been closing their homework gaps in very low-income and rural areas by self-provisioning wireless solutions have incentives to limit both access and bandwidth to the educational purpose of the connections—which also typically require a distinct SSID that often authenticates only school-provided devices.

Further, in anticipation of an argument that more permanent solutions to the homework gap are too costly, the Commission has a straightforward and perhaps even inevitable remedy at hand. The Commission can cap the reimbursement on a per-student basis to an amount deemed reasonable for conventional ISP services during the emergency period. Yet another rationale for technological-neutrality and for deferring to the judgment of local schools is that districts often have other sources of funding or subsidies that they could combine with a capped reimbursement to provide a superior and sustainable solution to the homework gap. That was precisely the situation in Council Bluffs, Iowa, and San Jose, California, where the school districts combined foundation grants, tech bond proceeds (in the case of San Jose’s East Side Union District), and extensive in-kind subsidies from their municipalities (free access to siting, electricity and fiber backhaul) to build out community Wi-Fi connections that provided roughly 10/5

Mbps service in their poorest neighborhoods with the highest concentration of students without home internet access. It would neither be good policy nor consistent with Congressional intent to deny Emergency Connectivity Fund support for efforts to extend these innovative solutions in places like Council Bluffs and San Jose.

### **III. The Commission Should Allow Schools and Libraries to Determine the Best Mix of Connectivity Solutions, Including Self-Provisioned Connections**

The PIOs urge the Commission to clarify that investments to extend school networks directly to students at home and other “self-provisioned” connections are among the “different technological solutions” that Congress has authorized for reimbursement from the Emergency Connectivity Fund provided that the funds are used exclusively to connect students and teachers for remote learning and other core educational purposes related to closing the homework gap. Accordingly, the PIOs strongly oppose the tentative conclusion in the Public Notice that would exclude funding for “the construction of new networks, including the construction of self-provisioned networks.”<sup>14</sup> While the Commission would be justified in putting a per student cap on the amount of funding reimbursed for “self-provisioned” connections—or for any other connections for that matter—there appears to be no rational basis for excluding a proven means of providing students with internet access that is often more robust and more cost-effective than purchasing mass-market ISP subscriptions which, in some portions of many districts, may be unavailable, unworkable (e.g., because cellular signals or capacity is inadequate to stream live class sessions indoors), or more expensive and financially unsustainable.

First, Congress intended that all possible solutions to the homework gap should be eligible for funding in a technological-neutral manner. As noted in the previous section, the

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<sup>14</sup> Public Notice at 7.

Committee Report accompanying the legislation highlighted a broad range of technological methods through which schools and libraries should be enabled to use this funding to support. The Report specifically states that it expects the Commission to fund “different technological solutions, including residential broadband service provided in different forms” to students for remote learning and library patrons off-campus and beyond the walls of libraries.<sup>15</sup> The Public Notice embraces an “underlying assumption that the construction of new networks is not supported by the statutory text enumerating eligible equipment in section 7402 of the American Rescue Plan,” but the Committee Report plainly demonstrates that this “underlying assumption” is incorrect.<sup>16</sup> In particular, the Congressional intent to support “*different technological solutions . . . provided in different forms*” reflects the fact that legislators forecast the use of these funds for schools and libraries to provide broadband service in whatever form they deem most cost-effective and broadly effective at expanding internet access for schooling.<sup>17</sup>

Second, in a number of school districts that might apply to use a portion of this funding for internet connections that would be considered “self-provisioned,” local officials could be extending those networks to serve additional students and not building “new networks.” Some districts have been opting for hybrid approaches that include extending their *existing* networks to serve more students while also purchasing ISP subscriptions for students in other areas.

A leading example of a hybrid and cost-effective approach is San Jose, California. The city and its local school districts have formed a partnership that combines paying for thousands of mobile hotspot subscriptions for some students, while also expanding the school-sponsored community Wi-Fi network that already covers some of the densest and poorest neighborhoods

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<sup>15</sup> *Conference Report* at 306-307, *supra* note 4.

<sup>16</sup> *Ibid.*; Public Notice at 7.

<sup>17</sup> *Conference Report* at 306-307, *supra* note 4 (emphasis added).

within the city’s East Side Union School District (ESUSD).<sup>18</sup> The school district, which built its original Wi-Fi network to address the homework gap in what is perhaps the city’s poorest neighborhoods, has found that thanks to a cost-sharing partnership with the city (which provides siting, electricity and fiber backhaul for Wi-Fi access points), in densely-populated neighborhoods the cost-per-student-connected is far lower than purchasing monthly broadband subscriptions and provides a sustainable, long-term solution to the homework gap. The PIOs urge the Commission to clarify that districts such as ESUSD would be eligible to apply for funding to help extend their existing cost-effective Wi-Fi network, and not deem them ineligible simply because that network was built in partnership with their municipality rather than by a commercial ISP. Additional examples of districts in this situation are described just below.

Third, as a matter of both pragmatic policy and principle, the Commission should empower educational institutions to self-provision connections to an E-Rate supported school or library network to the extent they determine that is the best option. Local autonomy has been a hallmark of the E-Rate program. The Commission should embrace and not abandon the principle of local control as it extends the program to provide pandemic relief for remote learning. Further, schools and libraries have demonstrated throughout this pandemic—and prior to it, using funding from other sources—that self-provisioned networks and connections, as well as partnerships with other parties (including municipalities, WISPs, private LTE networks, fiber providers and others), are often the most cost-effective and efficient solution to providing students with the broadband access they need for remote learning.

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<sup>18</sup> Sharon Noguchi, “Free Wi-Fi: San Jose, East Side Schools to Bring Internet to Neighborhoods,” *The Mercury News* (Oct. 3, 2016), <https://www.mercurynews.com/2016/10/03/free-wi-fi-sanjose-east-side-schools-to-bring-internet-to-neighborhoods/>.

***A. Schools and Districts Have Led the Way to Show the Commission Promising Examples of the Need for Supporting Self-Provisioned Networks***

In a November report profiling innovative school district solutions to the homework gap, the Open Technology Institute described many examples of districts partnering with their municipality and/or with private companies to self-provision networks that directly connect their students and teachers lacking internet access directly to the school's network for remote learning and other core educational purposes.<sup>19</sup> In some low-income neighborhoods these efforts had permanently closed the homework gap even before the pandemic-induced school shutdowns necessitated remote learning. The range of wireless technologies leveraged in these efforts—including meshed Wi-Fi, fixed wireless, private LTE using CBRS and EBS spectrum, and school network extension using TV White Space solutions—demonstrate the value of rules that are both technology neutral and explicitly supportive of self-provisioned networks.

The nation's school districts face very diverse challenges in connecting all students and teachers to internet access adequate for remote learning. The Commission needs to acknowledge that many school districts cannot simply write a check for monthly high-capacity broadband service to the local cable and/or mobile ISP that will meet the needs of *all* students and teachers at a reasonable cost (or at all in some areas). Among these is the fact that the availability and quality of commercial broadband internet access services can vary considerably not only between districts, but even in different neighborhoods or areas within the same district. Some areas have no cable providers nor any high-capacity wireline service. Other areas may have the option of DSL that is simply not enough capacity to meet the remote-learning needs of multiple students and adults at home. Many other areas, particularly in rural and exurban areas, lack

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<sup>19</sup> OTI E-Rate Report at 23-44.



sufficiently strong cellular signals to enable reliance on mobile hotspots or similar solutions to conduct remote learning.

Described below are examples of innovative school connectivity initiatives that should be explicitly deemed eligible for support from the Emergency Connectivity Fund, many of which the PIOs highlighted in recent comments supporting the SHLB, et al., Nevada, Colorado and other petitions proposing enhanced E-Rate funding and flexibility.<sup>20</sup>

- **Arlington, Virginia, Public Schools:** The Arlington public school system recently adopted a hybrid approach to bridging the divide between students with and without the broadband access needed for remote learning during the pandemic that highlights precisely why the Commission’s rules should support technologies and networks of all types, including those that are self-provisioned. Arlington has connected many student households through a county-funded partnership with Comcast’s Internet Essentials program for families. However, Comcast is unavailable everywhere in the district and other families were unable to receive the service due to qualification challenges.<sup>21</sup> To address those gaps, Arlington:

- 1) Utilized MiFi cellular hotspots coordinated by the service provider Kajeet;
- 2) Augmented the signals of its school Wi-Fi networks with external antennas to expand the coverage and quality of connections in the areas surrounding the schools;
- 3) Implemented “pop-up” Wi-Fi hotspots placed throughout the county at community centers that leverage the county’s fiber networks; and

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<sup>20</sup> PIOs E-Rate Petition Comments at 13-20.

<sup>21</sup> Schools, Health, & Libraries Broadband Coalition, “What Could Schools and Libraries Do With \$7 Billion?” Webinar Series (March 31, 2021), <https://www.shlb.org/uploads/G2G/Webinars/3.31.2021%20Webinar%20Slides.pdf> (“SHLB Presentation”) at 29-39.

4) Deployed a trial CBRS private LTE network in three months that extended Arlington Public School and county fiber networks for at-home learning without needing any additional fiber construction.<sup>22</sup>

Arlington provides the Commission with a case study of a determined, innovative, “all of the above” approach to meeting the remote learning crisis. Roughly 99 percent of all students in the district participated in remote learning conducted synchronously.<sup>23</sup> Arlington’s experience reinforces why the broadest and most flexible rules governing eligible technologies, services, equipment, and networks are paramount. In just one district, the public schools combined multiple technologies and network solutions that together could close the homework gap based on this suburban county’s unique local circumstances. The district could not rely solely on cable, or on mobile hotspots, or on amplifying the schools’ Wi-Fi signals. The Commission should acknowledge the Arlington public school system as a model and ensure that each individual school district has the flexibility it needs to tailor a mix of solutions based on local circumstances.

- **Lindsay Unified School District**: Lindsay, a low-income farming community with a population of 13,000 in California’s Central Valley, has extended broadband service to almost every student at all grade levels—90 percent of whom are eligible for the federal free or reduced lunch program—by building a wireless network dependent on a combination of Wi-Fi (in the neighborhoods with more population density) and Educational Broadband Service spectrum (in outlying regions).<sup>24</sup> Lindsay determined

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<sup>22</sup> *Ibid.*

<sup>23</sup> *Id.* at 39.

<sup>24</sup> OTI E-Rate Report; OTI Interview with Peter Sonksen, Network Administrator, and Barry Sommer, Director of Advancement, Lindsay Unified School District (June 1, 2020); *see* Ed Data, Education Data Partnership, Lindsay Unified District Profile, available at <http://www.eddata.org/district/Tulare/Lindsay-Unified>.

several years ago that a mobile hotspot solution was untenable in this agricultural community due to both the lack of strong cellular signals in many areas and the unsustainable recurring cost. As an alternative, the district tried installing Wi-Fi hotspots in an apartment complex adjacent to one of the district's six elementary schools, which extended access to 40 students. The pilot confirmed the workability of the solution and the district extended the network "by installing APs on each of its schools, as well as on city property and staff homes."<sup>25</sup> Lindsay is especially pertinent to this proceeding both due to the district's success in *permanently* bridging the homework gap, and also thanks to the district's finding that its network is cost-effective, sustainable, and is resulting in significant improvements in test scores, graduation rates, and college attendance.<sup>26</sup>

- **Council Bluffs, Iowa:** In Iowa, the Council Bluffs Community School District established a partnership with the city and private sector donors to deploy a community Wi-Fi network through a phased rollout that began with the neighborhoods with the lowest income populations.<sup>27</sup> The BLink-Bluffs Free Community Wi-Fi Network is currently in phase six of a 10-phase plan to provide service to all neighborhoods in the district as funding becomes available.<sup>28</sup>
- **San Jose's East Side Union School District:** Although situated very close to Silicon Valley, this district is a world apart in terms of broadband access. An estimated 30 percent of student households in the district do not have broadband service, two-thirds of

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<sup>25</sup> *Id.* at 25.

<sup>26</sup> *Id.* at 26.

<sup>27</sup> See Video Overview, BLink-Bluffs Free Community Wi-Fi Network, <http://blinkwifi.org/about.php>.

<sup>28</sup> "Blinks-Bluffs Free Community Wi-Fi," City of Council Bluffs, Office of the Mayor, available at <https://www.councilbluffs-ia.gov/1010/BLink-Bluffs-Free-Community-Wi-Fi>; See also "BLink: Bluffs Community Wi-Fi, <http://www.blinkwifi.org/>.

students are deemed to be socioeconomically disadvantaged, and a majority are eligible for free and reduced-price meals at school.<sup>29</sup> Despite these obstacles, the district has mostly bridged the homework gap in its poorest neighborhoods through its “Wi-Fi for Everyone” partnership with the City of San Jose. The school district utilized the proceeds from a school tech bond and a cost-sharing partnership with the city to construct a dual-use, mesh Wi-Fi network that is currently expanding into additional neighborhoods.<sup>30</sup>

- **McAllen Independent School District**: The pandemic imposed great hardship on the mostly low-income neighborhoods of McAllen, Texas. A quarter of the city’s 145,000 residents live below the poverty line.<sup>31</sup> The city has sought to address the deep divide of students lacking broadband at home by developing one of the strongest early demonstrations of a CBRS-powered educational broadband network. The district’s private LTE network relies on free General Authorized Access spectrum to backhaul Wi-Fi access points that the district provides to student households without internet access. City-owned water towers and light poles provide locations for CBRS base stations.<sup>32</sup> As OTI reported: “The CBRS network has been such a success it is providing service to all residents in McAllen who want and need it. By actually owning network infrastructure that offers wireless broadband connections to students and families who cannot afford it,

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<sup>29</sup> See Ed Data, Education Data Partnership, East Side Union High District Profile, available at <http://www.ed-data.org/district/Santa-Clara/East-Side-Union-High>.

<sup>30</sup> OTI E-Rate Report at 28.

<sup>31</sup> Martha DeGrasse, “CBRS bridges digital divide for McAllen, Texas,” FierceWireless (Sep. 24, 2020), <https://www.fiercewireless.com/private-wireless/cbrs-bridges-digital-divide-formcallen-texas>; Sue Marek, “Texas town uses CBRS spectrum to deliver free Wi-Fi to students,” LightReading (Sep. 24, 2020), <https://www.lightreading.com/security/texas-town-uses-cbrsspectrum-to-deliver-free-wi-fi-to-students/d/d-id/764162>; See Census Bureau Data, <https://www.census.gov/quickfacts/fact/table/mcallencitytexas/PST040219>.

<sup>32</sup> *Id.*

the city has a resilient, multi-purpose network that will offer much-needed connectivity both during the pandemic and for years to come.”<sup>33</sup>

- **Castleberry Independent School District:** Another Texas district, the predominantly low-income Castleberry ISD in Fort Worth, quickly closed the remote learning gap after the initial pandemic school shutdowns by deploying private LTE connections directly to students over CBRS spectrum from three towers it erected to replicate the sort of 4G connectivity that might be available if such service was affordable and robust enough to meet the needs of the town’s students and teacher.<sup>34</sup> Currently more than 750 of the town’s 1250 students rely on the new CBRS connections for remote learning and other educational needs, according to the districts CTO.<sup>35</sup>
- **Dallas Independent School District:** The district in Dallas, Texas, found that purchasing mobile hotspots for 40,000 students for \$25 a month as a short-term solution was too costly and decided to extend its fiber-optic network to neighborhoods with low-income students who live in households that cannot afford broadband access at home.<sup>36</sup> According to the CTO, the district commenced with cell towers at five sites, with the first site beginning service in late December servicing roughly 50 students, but eventually each tower could extend coverage to a radius of over one mile and service a few thousand students.<sup>37</sup> The district would distribute free receivers to each household to access the

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<sup>33</sup> OTI E-Rate Report at 32.

<sup>34</sup> Wayne Carter, “School District Buys Internet Transmission Towers to Keep Students Connected, NBC-5 News, Dallas/Fort Worth (March 20, 2020) (“NBC-5 March 20), available at <https://www.nbcdfw.com/news/coronavirus/school-district-buys-internet-transmission-towers-to-keep-students-connected/2335666/>.

<sup>35</sup> OTI Interview with Jacob Bowser, CTO, Castleberry ISD (March 31, 2021).

<sup>36</sup> David Ingram, “If you build it, they will learn: Why some schools are investing in cell towers,” NBC News (March 13, 2021), <https://www.nbcnews.com/tech/tech-news/schools-look-skyward-internet-service-building-cell-towers-rcna384>.

<sup>37</sup> *Ibid.*

network, which has sufficient speed to offer video conferencing for remote learning and filters to ensure the content is educational. This example is particularly pertinent to the Emergency Connectivity Fund, as an interview the CTO, Jack Kelanic, gave to NBC News demonstrated: “It’s the same service they would get on campus. They’re just getting it at home... We see this as a targeted, long-term solution... We’re willing to step into the neighborhoods that haven’t been built or are somehow underserved by the existing providers.”<sup>38</sup> This is precisely the sort of technological solution to the homework gap that the Commission should explicitly empower in its rules for the Emergency Connectivity Fund.

- **Fontana Unified School District**: This exurban school district, a city of 200,000 people in San Bernardino County, California, has become the anchor tenant for a private LTE network, built in partnership with Crown Castle Fiber, that will offer high-capacity fixed wireless broadband service over CBRS spectrum to the more than 36,000 students who need it.<sup>39</sup> “We’ve estimated that 55 to 60 percent of our students do not have reliable internet access outside of school,” according to Fontana USD Superintendent Randal S. Bassett.<sup>40</sup> Bassett estimates that roughly 400 cellular access points will be required to service 98 percent of the students’ homes. Fontana’s network only recently began construction, but the overall architecture is similar to that of the McAllen network

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<sup>38</sup> *Ibid.*

<sup>39</sup> “FUSD will launch private network, offer wireless access to all students at home,” Fontana Herald News (April 17, 2020), [https://www.fontanaheraldnews.com/news/fusd-will-launchprivate-network-offer-wireless-access-to-all-students-at-home/article\\_fcb474e4-80ec-11ea-b1cf8723921771ed.html](https://www.fontanaheraldnews.com/news/fusd-will-launchprivate-network-offer-wireless-access-to-all-students-at-home/article_fcb474e4-80ec-11ea-b1cf8723921771ed.html).

<sup>40</sup> “Fontana Unified to Launch Private Network, Offer Wireless Access to All Students at Home,” Fontana USD, Press Release (April 2020), available at <https://www.fusd.net/site/default.aspx?PageType=3&DomainID=4&ModuleInstanceID=76&ViewID=6446EE88-D30C-497E-9316-3F8874B3E108&RenderLoc=0&FlexDataID=16586&PageID=1>.

detailed above.<sup>41</sup> CBRS base stations will transmit connectivity to thousands of Wi-Fi hotspots (or Wi-Fi gateway devices) offered to students for use at the house. The Commission's current rules have made the cost of this network higher, according to Bassett, due to the fact that the district has had to resort to leasing additional fiber that is laid alongside the district's E-Rate supported fiber to send authenticated student VPN connections directly to school buildings, essentially duplicating the school's currently dormant network and dramatically increasing the district's costs.<sup>42</sup>

- **Charlotte and Halifax County public schools:** Two rural school districts in Southern Virginia petitioned the Commission for a waiver of cost allocation rules that would allow them to use TV White Space spectrum to extend their school networks to students within range. The districts petitioned after beginning a pilot project in 2016 that involved partnering with 18 schools that receive E-Rate funds and teach roughly 7,500 students.<sup>43</sup> The school districts noted: "Signals broadcast over TVWS can travel long distances to deliver high bandwidth internet service at low network costs. ... These TVWS base stations will enable students to connect from home to safe school district networks and access content and applications needed to complete their homework assignments and engage in other school-sanctioned educational activities."<sup>44</sup>

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<sup>41</sup> OTI E-Rate Report at 33; OTI Interview with Randal S. Bassett, October 20, 2020.

<sup>42</sup> *Id.*

<sup>43</sup> Joint Petition For Clarification or, in the Alternative, Waiver of Microsoft Corporation, MidAtlantic Broadband Communities Corporation, Charlotte County Public Schools, Halifax County Public Schools, GCR Company, and Kinex Telecom, WC Docket No. 13-184 (June 7, 2016), available at <https://ecfsapi.fcc.gov/file/60002098542.pdf>.

<sup>44</sup> *Id.* at 11-12.

- **Boulder Valley School District**: Boulder, Colorado, implemented ConnectME, a pilot program, employing TVWS spectrum and technology to connect students remotely was hindered by the Commission’s failure to grant a waiver of cost allocation rules.<sup>45</sup> With the onset of the pandemic and the homework gap widening into a remote learning chasm, BVSD expanded its early successful pilots in Lafayette and Boulder to each school in the district.<sup>46</sup> The district is working with a local WISP to offer service using CBRS spectrum. Unfortunately, these successful efforts face added and unnecessary costs because the effort is forced to rely on bond-funded school district fiber backhaul instead of the already-paid-for school district fiber subsidized by E-Rate.
- **Brooklyn, New York, Public Library System**: After the pandemic hit, the Brooklyn public libraries found that up to 6,000-8,000 people were still using their Wi-Fi from outside library buildings after the libraries were forced to shut down. To increase the reach of library services to their community, they attached outdoor wireless access points on the outer walls of 44 branches of the library with priority given to those closest to New York City public housing sites. This effort extended wireless broadband access to 23,000 residents living within 300 feet of one of these 44 Brooklyn Public Library even though the libraries themselves remained closed.<sup>47</sup> The library is making this free service available to anyone within Wi-Fi range of a library participating in the “Bklyn Reach” program regardless of whether the individual has a library card or not.<sup>48</sup>

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<sup>45</sup> Petition for Waiver on behalf of Boulder Valley School District Samuelson-Glushko Technology Law & Policy Clinic (TLPC), WC Docket No. 13-184, WC Docket No. 10-90 (May 16, 2020), available at <https://ecfsapi.fcc.gov/file/60001843683.pdf>.

<sup>46</sup> OTI E-Rate Report at 40-41.

<sup>47</sup> SHLB Presentation at 25.

<sup>48</sup> Brooklyn Public Library Website, “Bklyn Reach” (Accessed March 31, 2021), <https://www.bklynlibrary.org/reach>.



***B. The Commission Should Explicitly Allow Self-Provisioned Networks to Ensure Schools and Libraries are Empowered to Choose Optimal Solutions to the Homework Gap***

The scope of eligibility and priority the Commission adopts for the Emergency Connectivity Fund will determine whether the initiative meets its potential to close the homework gap by empowering schools and libraries to choose solutions tailored to meet the specific needs of their communities. As OTI detailed in a report about the homework gap and the E-Rate program’s potential to bridge this gap during the pandemic, one of the barriers to schools connecting low-income for remote learning was the lack of flexibility in the E-Rate program.<sup>49</sup> As the CTO of the Council Bluffs Community School District in Iowa, David Fringer, told OTI in an interview for the report: “The lack of flexibility in using Category Two funding both encourages unnecessary internal upgrades and deters other initiatives such as Wi-Fi connectivity to needy students at home. ‘Now what districts need is an option to use Cat Two to extend their networks, such as for Wi-Fi extensions of the school network,’ Fringer said.”<sup>50</sup> Similarly, in Lindsay Unified School District in rural California, OTI highlighted how the Commission “effectively penalizes Lindsay for relying on the district’s fiber backhaul to give students direct access to the school’s filtered network at home. According to Lindsay officials, the district is forced to throttle the bandwidth available to students at home to reduce cost, even though the school itself pays for more bandwidth than it needs.”<sup>51</sup>

In adopting rules to distribute reimbursements from the Emergency Connectivity Fund, the Commission should ensure that schools and libraries have the means to overcome these obstacles and adopt the most effective solutions regardless of what companies profit. The entire

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<sup>49</sup> OTI E-Rate Report at 40-41.

<sup>50</sup> *Id.* at 28.

<sup>51</sup> *Id.* at 26.

purpose of expanding support for the E-Rate program is not to help incumbent ISPs pad their bottom lines, but first and foremost to help the nation's community anchor institutions effectively serve their local communities to strengthen education. There is strong support in the record the Commission recently opened seeking comment on the pending petitions calling for expanded E-Rate funding and flexibility for a technologically-neutral approach to supporting off-campus E-Rate networks and including a wide range of equipment as part of the expanded program (such as mobile and fixed wireless towers) to ensure schools and libraries are able to deploy the networks solutions best-suited to their circumstances.<sup>52</sup> The PIOs agree with Red River Technology:

Whatever action the Commission decides to take with respect to remote learning, it should maintain the competitively neutral and technology-neutral stance that has always characterized the E-rate program. Contrary to some commenters' assumptions, wireless technologies can be deployed in 30 to 60 days, depending upon the engineering involved. Rural areas can often be installed much more quickly than urban areas, and can be very cost-effective.<sup>53</sup>

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<sup>52</sup> Reply Comments of INCOMPAS, WC Docket No. 21-31 (Feb. 23, 2021) at 4 (“Establishing a competitively neutral approach to support remote learning should ensure that schools, libraries, and consortia continue to receive the E-rate supported services that best meet their needs.... Where solutions such as hotspots, mobile wireless towers, or equipment that can reasonably be expected to support remote learning (such as devices that combine a modem and a router) require waivers of the eligible service rules, INCOMPAS urges the Commission to grant such a waiver to permit this equipment.”); Reply Comments of the Council of the Great City Schools, WC Docket No. 21-31 (Feb. 23, 2021) at 3; Reply Comments of the Alliance for Excellent Education et al., WC Docket No. 21-31 (Feb. 23, 2021) at 3; Reply Comments of Ookla, WC Docket No. 21-31 (Feb. 23, 2021) at 3; Comments of WISPA, WC Docket No. 21-31 (Feb. 23, 2021) at 4-5; Comments of the City of Chicago, Chicago Public Library and Chicago Public Schools, WC Docket No. 21-31 (Feb. 23, 2021) at 3; Comments of Internet Association, WC Docket No. 21-31 (Feb. 23, 2021) at 9-10; Comments of Microsoft, WC Docket No. 21-31 (Feb. 23, 2021) at 4; Comments of Kajeet, WC Docket No. 21-31 (Feb. 23, 2021) at 4-5; Comments of Amazon, WC Docket No. 21-31 (Feb. 23, 2021) at 5-6; Comments of Apple, WC Docket No. 21-31 (Feb. 23, 2021) at 3.

<sup>53</sup> Reply Comments of Red River Technology, LLC, WC Docket No. 21-31 (Feb. 23, 2021) at 2.

The main argument that some incumbent ISPs assert in opposition to funding for self-provisioned networks or connections is that these initiatives are too time and cost-intensive and therefore ill-suited to the emergency purposes of an E-Rate expansion.<sup>54</sup> This self-serving argument is not only incorrect, it completely distorts the purpose of both the sort of school district initiatives described above and of the justification for federal subsidies. The PIOs strongly disagree with fixed providers’ “just trust us” approach to bridging the homework gap, which amounts to shutting out any competitive providers and technologies that could be funded by E-Rate—even if these competitors are merely provisioned by the very institutions seeking to connect their local students.

In fact, all self-provisioned networks established so far were implemented absent E-Rate support—financial and regulatory—which means that schools and districts had far more on the line than they do in making judgment calls about cost-effective E-Rate expenditures. Clearly a wide variety of school districts across the country have determined that self-provisioning connections to students and teachers off campus can be the most cost-effective solution, at least in certain areas. For example, according to the CTO of the San Jose district described above, the district determined that building a community mesh Wi-Fi network, if built in partnership with the City of San Jose, was far more cost-effective than purchasing monthly mobile or cable broadband subscriptions for low-income students in the long term, *and* provided vast and wide-sweeping benefits to the community’s educational outcomes.<sup>55</sup> He also estimated that, with the experience and infrastructure developed for the James Lick High School pilot deployment, all

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<sup>54</sup> Reply Comments of NCTA, WC Docket No. 21-31 (Feb. 23, 2021); Reply Comments of Verizon, WC Docket No. 21-31 (Feb. 23, 2021); Reply Comments of USTelecom, WC Docket No. 21-31 (Feb. 23, 2021); Reply Comments of ACA Connects, WC Docket No. 21-31 (Feb. 23, 2021); Reply Comments of NTCA, WC Docket No. 21-31 (Feb. 23, 2021).

<sup>55</sup> OTI E-Rate Report at 29-30.

students across San Jose (including some adjacent neighborhoods just outside the city) could be connected for a total cost of only \$24 million, permanently closing the homework gap.

The Commission should reject calls from ISPs to turn a program of emergency support to connect students and teachers into a corporate welfare program that prioritizes ISP profits and forces local officials to pay monthly subscription costs even when there are more cost-effective options. The PIOs urge the Commission to heed the broad and diverse collection of commenters—including schools and libraries, telecommunications providers, and technology companies—that have urged the Commission to authorize the broadest possible variety of technologies to be used to deploy off-campus service through E-Rate.<sup>56</sup> The PIOs argue the Commission should reject the view of the fixed providers due to the broad-sweeping and counterproductive impositions such a restrictive view of the E-Rate program would bring. As the Council of the Great City Schools argues:

Flexibility should extend not just to the eligible services and equipment list, but also to program requirements that obstruct the goals the Commission seeks and students need. At the top of the Council’s list of needed flexibilities is the requirement to cost-allocate out ineligible costs such as off-campus private LTE networks. The program rules that limit eligibility for off-premises use and require

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<sup>56</sup> Reply Comments of INCOMPAS, WC Docket No. 21-31 (Feb. 23, 2021) at 4 (“Establishing a competitively neutral approach to support remote learning should ensure that schools, libraries, and consortia continue to receive the E-rate supported services that best meet their needs.... Where solutions such as hotspots, mobile wireless towers, or equipment that can reasonably be expected to support remote learning (such as devices that combine a modem and a router) require waivers of the eligible service rules, INCOMPAS urges the Commission to grant such a waiver to permit this equipment.”); Reply Comments of the Council of the Great City Schools, WC Docket No. 21-31 (Feb. 23, 2021) at 3; Reply Comments of the Alliance for Excellent Education et al., WC Docket No. 21-31 (Feb. 23, 2021) at 3; Reply Comments of Ookla, WC Docket No. 21-31 (Feb. 23, 2021) at 3; Comments of WISPA, WC Docket No. 21-31 (Feb. 23, 2021) at 4-5; Comments of the City of Chicago, Chicago Public Library and Chicago Public Schools, WC Docket No. 21-31 (Feb. 23, 2021) at 3; Comments of Internet Association, WC Docket No. 21-31 (Feb. 23, 2021) at 9-10; Comments of Microsoft, WC Docket No. 21-31 (Feb. 23, 2021) at 4; Comments of Kajeet, WC Docket No. 21-31 (Feb. 23, 2021) at 4-5; Comments of Amazon, WC Docket No. 21-31 (Feb. 23, 2021) at 5-6; Comments of Apple, WC Docket No. 21-31 (Feb. 23, 2021) at 3.

cost-allocation have severely constrained the ability of school districts to expand wireless access off campus. These limitations affected school districts' abilities to address the homework gap before the pandemic, and numerous commenters noted that the rules have curtailed more widespread participation in remote learning since the COVID-19 emergency forced almost every school in the nation to close.<sup>57</sup>

Schools and libraries should be able to assess their circumstances and receive at least partial support for what they deem the most cost-effective solution for their needs. The State of Nevada's petition exemplifies this perspective. The state highlighted the experience they have with the cost-effective uses of fixed wireless to connect students for remote learning while also underscoring "the rural landscape of Nevada necessitates a variety of solutions to solve the gap... . The E-rate program should afford flexibility in the determination of what services are deemed effective at the local level."<sup>58</sup> There is no evidence that "self-provisioned networks" are less cost-effective than paying incumbent ISPs month after month for access to commercial networks, which in many cases may indeed be more costly and time-consuming if any additional wireline or fiber deployment is needed and if any students live at an address not currently serviceable by a fixed provider. PIOs agree with ENA Services, which argues:

It is simply incorrect that wireless networks are suitable only as temporary solutions, or that they are not cost effective for schools and libraries. In fact, purpose-built wireless networks, . . . can be ideal solutions for some schools and libraries that are trying to bring the classroom to students at home. . . . In the specific case of remote learning, wireless networks that can reach many households in a specific geography simultaneously are likely to be a cost-effective approach—and possibly the most cost-effective approach—in urban areas, where there is significant density of students and teachers and a greater likelihood that they may not have Internet access at home. These types of wireless services may also be the most cost-effective approach in rural areas that currently have no broadband facilities at all.<sup>59</sup>

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<sup>57</sup> Reply Comments of the Council of the Great City Schools, WC Docket No. 21-31 (Feb. 23, 2021) at 3.

<sup>58</sup> Reply Comments of the State of Nevada, WC Docket No. 21-31 (Feb. 23, 2021) at 3.

<sup>59</sup> Reply Comments of ENA Services, LLC, WC Docket No. 21-31 (Feb. 23, 2021) at 3-4.

Schools and libraries have shown that even absent E-Rate support, self-provisioned networks can be the most cost-effective and efficient method of providing students with the broadband services they need to conduct remote learning during the COVID-19 pandemic as the numerous examples detailed above demonstrate—and these networks will be crucial as some schools move to a hybrid simultaneous in-person and remote learning set-up.<sup>60</sup> As the State of Nevada argues, in a follow-up to its original petition seeking Commission relief to support off-campus remote learning:

Rooftop fixed wireless hotspots could leverage school sites which have a dense cluster of unserved or underserved students nearby to the school itself. Thirteen of the seventeen public school districts in Nevada utilize non-E-rate funded internet access from the Nevada System of Higher Education (NSHE). The utilization of rooftop fixed wireless hotspots using NSHE supplied internet reduces costs of the monthly recurring charges to simply the maintenance fee... A second solution... Fixed wireless student community hotspots have the potential to be a more permanent solution providing cost-effective broadband service to an area of low broadband adoption or a rural underserved area.<sup>61</sup>

Further, incumbent providers to schools and libraries through the E-Rate program cannot necessarily be trusted to offer the most cost-effective service. Recently, *The Washington Post* reported disturbing allegations that AT&T consistently overcharged underserved schools serving historically marginalized communities for network provision through E-Rate and allegedly abused the “lowest corresponding price” protocols which govern the interaction between providers and educational institutions through the program.<sup>62</sup>

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<sup>60</sup> Comments of the Chicago Public Schools, the City of Chicago, and the Chicago Public Library, WC Docket No. 21-31 (Feb. 16, 2021) at 3; OTI E-Rate Report; Comments of the Public Interest Organizations, WC Docket No. 21-31 (Feb. 16, 2021) at 12-21.

<sup>61</sup> Reply Comments of the State of Nevada, WC Docket No. 21-31 (Feb. 23, 2021) at 2.

<sup>62</sup> Laura Meckler and Douglas MacMillan, “‘There has to be an accounting’: Former AT&T lawyer says company systemically overcharged neediest schools,” *The Washington Post* (March 18, 2021), <https://www.washingtonpost.com/education/2021/03/18/att-school-internet-pricing/>.

#### **IV. The Commission Should Allow Schools and Libraries the Flexibility to Provide Service In the Locations They Sees Fit to Bridge the Homework Gap**

Just as the Commission should give schools and libraries flexibility to determine the mix of technologies, services and equipment that best meet local circumstances, the Commission should also explicitly enable these institutions to deploy these solutions in the *locations* they deem most effective at bringing broadband services to students lacking home internet access. The Commission asks the public whether it should “impose restrictions on what locations can receive wireline and fixed wireless services supported by this Fund for remote learning,” to which PIOs emphatically respond, “No.”<sup>63</sup> As the Commission acknowledges in the Public Notice, many students, teachers, and library patrons may not live at one specified address, or may live in a location that cannot be connected quickly enough.<sup>64</sup> Further, since there is no assurance that even this new funding will be enough to fully meet the need, shared internet access in certain locations could prove to be an effective way to connect more students more quickly. Restrictive rules on where services can be offered would be counterproductive and against the very nature of the “emergency” referenced in the Emergency Connectivity Fund. As previously detailed, cases such as the Brooklyn Public Libraries and Arlington Public Schools demonstrate how localities are able to make key decisions on where to deploy services to ensure the most vulnerable members of the schools and libraries are supported.

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<sup>63</sup> Public Notice at 8.

<sup>64</sup> *Ibid.*

## V. Conclusion

The Commission's interpretation and administration of the Emergency Connectivity Fund will be essential to closing the homework gap. Millions of students have been forced to rely on unstable or nonexistent broadband service for remote school for over a year and require immediate assistance. At the same time, the diverse and innovative initiatives that districts are making to meet this emergency need can also provide invaluable pilots, data and proofs of concept for future efforts to close the homework gap more permanently. The PIOs urge the Commission to ensure the rules it adopts for the Emergency Connectivity Fund are technology-neutral and support self-provisioned networks and local choice broadly. For this program to work, schools and libraries must be given the flexibility they have lacked for the first 12 months of this pandemic to provide the communities they know best with the broadband access they need to participate in education to the fullest extent.

Respectfully Submitted,

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